

Geologic Timetable

Era	Period	Epoch	(Millions of Years Ago) Began	(Millions of Years) Duration	Characteristic Life	Physical Events
CENOZOIC "Age of Mammals"	Quaternary	Recent	—	(11,000 yrs.)	Man dominant. Domestic animals develop.	West Coast uplift continues in U.S. Great Lakes form.
		Pleistocene	2	2	Primitive man appears, develops. Elephants flourish in N. America, then die out.	Ice Age. Raising of mountains and plateaus in western U.S.
		Pliocene	5	3	Modern horse, camel, elephant develop. Sequoias decline; tropical trees driven south.	N. America joined to S. America. Sierras and Appalachians re-elevated.
	Tertiary	Miocene	23	18	Horse migrates to Asia, elephant to America. Grasses, grazing animals thrive.	N. America joined to Asia. Vulcanism in northwest United States, Columbia Plateau.
		Oligocene	38	15	Mammals progress. Elephants in Africa. Monkeys die out in N. America.	Alps and Himalayas forming. Vulcanism in western United States.
		Eocene	53	15	Pygmy ancestors of modern horse, other mammals. Diatoms, flowering plants thrive.	Coal forming in western U.S.
		Paleocene	65	12	Many new mammals appear.	Uplift in western U.S. continues.
MESOZOIC "Age of Reptiles"	Cretaceous		135	71	Dinosaurs, ammonites die out. Mammals, birds advance. Flowering plants, hardwoods rise.	Uplift of Rockies begins. Colorado Plateau raised. Coal swamps in western U.S.
	Jurassic		192	57	Giant dinosaurs. First birds, more mammals. Conifers and cycads abundant.	Rise of Sierra Nevadas, West Coast mountains, Basin and Range mountains.
	Triassic		230	38	Reptiles thrive. First mammals. Forests of conifers and cycads.	Vulcanism in New England, New Jersey. Palisades of Hudson formed.
PALEOZOIC "Age of Invertebrates"	Permian		290	60	Trilobites, seed ferns, scale trees die out. Corals abundant.	"Ancestral Appalachians" formed. Ice Age in South America. Salt-forming deserts in western U.S.
	Pennsylvanian		320	30	First reptiles. Many giant insects. Spore-bearing plants, amphibians flourish.	Great coal-forming swamps in North America and Europe.
	Mississippian		350	30	Amphibians and crinoids flourish. Ferns, conifers abundant.	Extensive submergence of continents.
	Devonian		410	60	First amphibians; fishes abound. First land plants, forests.	Mountain building in New England and Canada. White Mountains raised.
	Silurian		435	25	First land animals (spiders, scorpions). Fish develop; marine invertebrates thrive.	Salt-and-gypsum-forming deserts in eastern U.S.
	Ordovician		485	50	First vertebrates (fish). Marine invertebrates thrive: mollusks, trilobites, graptolites.	Taconic and Green Mts. form. Half of N. America submerged.
	Cambrian		560	75	Many marine invertebrates (trilobites, brachiopods, snails, sponges). Many seaweeds.	Extensive deposition of sediments in inland seas.
PROTEROZOIC			2500	1940	No life on land. Simple marine plants (algae, fungi) and marine worms. Stromatolites dominant. Others probably existed, but fossil evidence is lacking.	Great volcanic activity, lava flows, metamorphism of rocks. Formation of iron, copper, and nickel ores.
ARCHEOZOIC			4500-3800	1300	?	?

Geologic Timescale Activity – Put the events in order

Using the Geologic timescale on page 505 in the text, find out when each of the following events occurred. Put them in order in a table including the era, period and epoch (if applicable) as well as the number of years ago for each.

Hint: Look on page 505 to find out how many million years ago each event happened. Write the number beside each event, right on this paper. Then put all the events in order from most recent to longest ago in a chart like the one below:

Millions of Years ago	Event	Era	Period	Epoch

1. Coal formed in western N. America
2. first reptiles
3. stromatolites dominate
4. first vertebrates (fish)
5. uplift of Rockies begins
6. first mammals
7. first birds
8. formation of iron, copper and nickel ores
9. primitive man appears
10. monkeys die out in N. America
11. Alps and Himalayas forming
12. dinosaurs die out (actually at the *end* of the Cretaceous)
13. first amphibians
14. first land plants
15. first land animals
16. ice age in S. America
17. ice age (most recent)
18. man dominates
19. modern horse, camel, elephant develop
20. America joined to S. America